

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A suction and discharge valve arrangement for a small hermetic compressor of the type presenting a compression cylinder, which has an end closed by a valve plate (10), and which is supplied by a suction pipe disposed adjacent to the valve plate and substantially orthogonal to the cylinder axis, characterized in that the valve plate comprises:

a discharge orifice substantially centralized in relation to the axial projection of the internal contour of the compression cylinder,

at least one suction orifice, which is:

internal to said axial projection of the internal contour of the compression cylinder
and external to the a contour of the discharge orifice, and

occupying an annular sector substantially concentric to at least one of the internal contour of the compression cylinder and discharge orifice in order to maintain with the latter discharge orifice a certain minimum spacing and defining at least part of a suction passage,

with an end opened to the inside of the compression cylinder and an opposite end opened and connected to the suction pipe, ~~by means of~~ via a transition portion, which is incorporated to one of the parts defined by the suction passage and the suction pipe, and

with a cross section configured to impart to the gas flow a change of direction, which allows the whole cross sectional area of the suction orifice to be fully used for gas flow passage.

2. (Previously Presented) Arrangement, according to claim 1, characterized in that the transition portion defines a duct portion connecting the suction pipe to the suction passage and being at least partially bent in its internal profile.

3. (Previously Presented) Arrangement, according to claim 2, characterized in that the transition portion is incorporated to the suction passage.

4. (Previously Presented) Arrangement, according to claim 3, characterized in that the suction portion is defined by the suction orifice itself, presenting a gas inlet end coupled to the suction pipe and a gas outlet end opened to the inside the compression cylinder.

5. (Previously Presented) Arrangement, according to claim 4, characterized in that the transition portion is defined by the gas inlet end of the suction orifice, which is curved in part of its contour in order to define a profile for gas admission.

6. (Previously Presented) Arrangement, according to claim 4, characterized in that the valve plate affixes, on its face turned to the inside of the compression cylinder, one of the end portions of a suction valve vane, with its other end portion being displaced, by elastic deformation of the vane, between a closed valve position, blocking the suction orifice, and an open valve position, liberating said suction orifice, said suction valve vane being located inside the axial projection of the internal contour of the compression cylinder and outside the axial projection of the contour of the discharge cylinder.

7. (Previously Presented) Arrangement, according to claim 6, characterized in that the end portions of the suction valve vane are opposite to each other and located in regions of the valve plate that are diametrically opposite in relation to the contour of the discharge orifice.

8. (Previously Presented) Arrangement, according to claim 7, characterized in that the suction valve vane presents a substantially "U" shaped contour.

9. (Previously Presented) Arrangement, according to claim 1, characterized in that the suction orifice is in the shape of an annular sector substantially concentric to at least one of the internal contours of the compression cylinder and discharge orifice.

10. (Previously Presented) Arrangement, according to claim 1, characterized in that the discharge orifice is circular and coaxial to the internal contour of the compression cylinder.

11. (Currently Amended) A suction and discharge valve arrangement for a small hermetic compressor of the type presenting a compression cylinder, which has an end closed, by a valve plate and which is connected to a suction pipe disposed adjacent to the valve plate and substantially orthogonal to a cylinder axis, wherein the valve plate comprises:

a discharge orifice, and

at least one suction orifice disposed internal to an axial projection of an internal contour of the compression cylinder and external to a contour of the discharge orifice, wherein the at least one suction orifice comprises an end opened to the inside of the compression cylinder and an opposite

end opened and connected to the suction pipe ~~by means of~~ via a transition portion which is incorporated to ~~one of the valve plate and the suction pipe~~, said transition portion having a cross section configured to impart to the gas flow a change of direction which allows the whole cross sectional area of the suction orifice to be fully used for gas flow passage.

12. (Currently Amended) The valve arrangement of claim 11, wherein the at least one suction orifice occupies an angular sector substantially concentric to at least one of the internal contour of the compression cylinder and discharge orifice in order to maintain with the ~~latter~~ discharge orifice a certain minimum spacing and defining at least part of a suction passage.

13. (Original) The valve arrangement of claim 12, wherein the discharge orifice is provided substantially centralized in relation to an axial projection of the internal contour of the compression cylinder.

14. (New) A suction and discharge valve arrangement for a small hermetic compressor of the type presenting a compression cylinder, which has an end closed by a valve plate and which is connected to a suction pipe disposed adjacent to the valve plate and substantially orthogonal to a cylinder axis, wherein the valve plate comprises:

a discharge orifice substantially centralized in relation to an axial projection of the internal contour of the compression cylinder, and

at least one suction orifice disposed internal to said axial projection of the internal contour of the compression cylinder and external to the contour of the discharge orifice.